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EVALUATION REPORT

OFG 518-0002 RURAL COMMUNITY HEALTH PROJECT

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Prepared by

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## PRELIMINARIES

Purpose of Consultation: The assignment was to participate in the end-of-project evaluation of OPG 518-0002 with MAP International in Quito, Ecuador. The work was undertaken at the request of USAID/Ecuador who asked that the consultant assist project staff in the planning of their own final report, to be submitted in early 1983, and to write his own evaluation report. The two reports are to be considered together as the end-of-project summary evaluation.

Conduct of the Visit: I arrived in Quito on October 24th and departed on November 12th, 1982. Interviews were conducted with USAID personnel, Ministry of Health officials, Project staff (both expatriate and Ecuadorian), community leaders in project areas, the Provincial Health Officer of Chimborazo and others at the Vozandes Hospitals in Quito and in Shell. The Project staff and I conducted a one day evaluation workshop with project staff who met in Quito. Site visits were made in Chimborazo and Morona-Santiago provinces, and at the hospital center in Shell. Due to limiting weather conditions it was possible to visit only two communities where health workers were assigned in Chimborazo and one in Morona-Santiago. Project files at the office of AID and at Vozandes Hospital in Quito were accessed. Upon returning to the United States I was able to talk with Sara Risser and the project director, and Dick Crespo, formerly of MAP International in Quito.

Evaluation Background: The Project provides monthly and annual reports to USAID. These have routinely indicated progress in recruiting, training and assignment of health workers as well as programmatic change, coordination with government agencies and expansion of project interests. Problems and accomplishments are both covered in these reports. These reports are used

as a continuing evaluation as are staff meetings.

As an outgrowth of the MAP sponsored evaluation workshop and the need for an end-of-project report Project staff are gathering information and preparing a document that will focus on target achievement and overall accomplishments. This will supplement and, probably, counter the present report to some extent.

In March of 1981 I performed an interim evaluation of the Project. The purpose of that exercise was to make recommendations regarding the extension of USAID funding beyond the initial three year period. The Project at that time was fully operational but wanted additional time to observe these operations and to work out mechanisms for transferring or sharing service responsibilities with the government of Ecuador.

It was recommended that the extension be awarded. It was suggested (1) that Project staff exert more effort in monitoring and describing operations so that evaluation would be possible and (2) that they hold a meeting at which they would present to governmental officials and other interested persons a full description of their activities and accomplishments.

The meeting was held in late 1981 and Project staff have been collecting data and developing a plan for their self-evaluation. Many questions in the report were, however, not yet completely answered and it is suggested that the staff review it in preparing their own formal report.

The Method and Scope of the Evaluation: Data used in the writing of this report are drawn largely from informal observations and discussions with Project staff, government and AID officials, health workers, community members, and from Project and USAID generated routine reports. While quantitative information was used to some extent we are here more dependent upon subjective data and their analysis.

Most conferences took place in administrative offices and at arranged meetings. Field visits in two provinces afforded the opportunity to speak with staff and workers as they performed service and supervisory task. A day-long workshop was held with field and office staff.

Discussions with Project staff with longer term experience in Ecuador and other areas periferal to the Project but with long residence in program areas provided considerable background for assessing historical and current socio-cultural conditions.

Guidance in focussing the attention of coverage of the observations and report was taken from the initial Proposal, and questions raised by AID staff. Materials developed by the Project staff and at the evaluation workshop conducted by MAP in July offered additional concerns.

A very thoughtful document prepared by Judith Tendler, Turning Private Voluntary Organizations into Development Agencies: Questions for Evaluation (AID Program Evaluation Discussion Paper No. 12), was provided to me at the end of my stay in Ecuador. While I received it late it has stimulated additional retrospective concern for attending to questions somewhat different than would have been the case.

The overall intent of this evaluation was to assess the Project and its outcome. Quantitative measures of output such as services rendered, population served, persons trained, and supervision provided are only briefly touched on here. These matters were discussed with Project staff and some recommendations were made regarding the collection and presentation of these data within the context of the log frame. Those data are being organized

by the staff. This report depends more on qualitative concerns and approaches. In trying to describe what the Project has done and how the special characteristics of its context of the implementing agencies and of the Project design may have enhanced or limited its ability to provide intended services and to insure that those services can be sustained, I have attempted to raise questions and to make suggestions that should be addressed by Project staff in the preparation of their report. I have tried to highlight aspects of the Project that appear important for both the success of this particular intervention and the replication of the effort elsewhere.

There are some important evaluational questions that I am not able to address because my observations and available data are limited. I cannot, for example, judge the extent to which Project coverage satisfies needs, nor can I compare the performance of the Project with other health service activities in Ecuador. Additionally, I am unable to assess the continuing health service activities in areas for which responsibility has been transferred from Project to the government. It is hoped that more will be done on these topics by the staff.

The complete openness and considerable knowledge evidence by Project staff was unusual and worth comment. They were both patient and exceedingly reflective in answering to questions and they responded with alacrity to all needs for further information, documentation and insight. Without that even this limited evaluational analysis would have taken considerably more time, and might not have been possible at all.

## PROJECT SUMMARY

The project was initially funded by AID in October of 1978. The original funding period was for three years but that was extended for one additional year and then one more quarter. Current AID funding will expire in December of 1982.

The Project grant was awarded to MAP International. The primary implementing agency is Vozandes Hospital. The responsible group at Vozandes is its Community Development Office. MAP International and a number of other Protestant Missionary PVOs working in Ecuador provide considerable in-kind support for the Project. At the provincial level the implementers have worked through Indigenous Evangelical associations to gain community acceptance and participation in Project activities.

Project supervisory and administrative staff consist of expatriates, with one exception, the supervising physician in Chimborazo province.

The original Project plan called for the extension of primary health care services over areas of five socially and culturally remote provinces of Ecuador. Services were implemented in four provinces, Chimborazo, Bolivar, Pastaza and Morono-Santiago. The fifth province, Loja, was dropped because of lack of available supervisory staff there and because the Ministry of Health altered its own program in the area.

The target populations with each projected area consist of non-Spanish speaking people (primarily Quichua and Shuara) who live in rural areas and have had very little access to health services and assistances provided by government agencies. Expatriate missionary groups had been providing some limited, largely curative health services in these areas. The Project was designed to expand and to rationalize the various efforts to provide health

services and to coordinate the efforts of the private missionary groups that had been operating independently.

The Project initially focussed exclusively on the provision of promotive, educational and limited curative services that were offered through health workers it had trained. Via cooperation with other programs and personnel working in the areas it has expanded its shared scope of concern to include water wells and pumps, home gardens and various other community development activities. Health services continue to be the primary interest of the Project and these other activities have been handled in a coordinated manner.

From the beginning, Project directors have seen their efforts as being supplemental to governmental activities in health services in Ecuador. The Project has been viewed as a means for extending services beyond the areas where the government was operating and as a test of the feasibility of employing indigenous personnel in a supervised program of training and service provision. It has explored various training methods and supervisory patterns and has attempted to tailor training content and worker task assignments to local conditions in the four areas and to individual capacities of health workers.

Summary of Results: During the first two and one half years the Project attended largely to planning, developing training materials and curricula, gaining community (and government) acceptance and producing some 130 trained community level health workers. Of these, 90 continue to function as either promoters or auxiliaries.

Project workers have been providing services since the first year but it is probably fair to say that it was during the third year that it became fully operational and had consistent coverage over the full target area. At the time it was becoming fully operational coordination with the government's

program increased rapidly and a system of shared responsibility developed. This meant that the independence of the Project was reduced, making it difficult to judge clearly its independent impact on population health and health behavior. Some project areas were fully assumed by the government's program, others were retained by the Project and additional supervisory and training responsibilities for other areas were taken over by the Project staff.

That there has been an impact on what the government program is doing is evident. Health services that the government has wanted to offer are more extensively offered than would otherwise have been possible. Participation of Project staff and adaptation of some of the materials in the government's program in some areas has influenced the character of training.

Some techniques and tactics of operation have also been adopted by the government. Government health workers are now encouraged to take interest in a broader set of activities under the rubric of health. They focus not only on personal health services and community health promotion but also are concerned with water supply and relations with other ministries as well as the MOH.

Acceptance by communities of the health worker idea has been universal among those that have them. This interest was assured to some extent since communities had to ask to participate but none have withdrawn as communities although some health workers have left the program.

Routine health service have been extended to be accessible to at least 40,000 people living in communities that have been served by the Project. Vaccination of infants and children in those currently served under the Project is extensive (BCG, DPT, measles, OPV).

Families appear to have high awareness of relationships between health and behavior, and health and environment and of means by which disease is

transmitted. They also recognize the efficacy of immunization as prevention. This awareness has led to an increased interest in latrine construction, tendency to separate animals from living areas and high participation in prevention programs.

As a result of the Project and assistance from community level workers and Project staff, there has been heightened awareness of services and support that were potentially available from the MOH and other government agencies. Communities have been assisted in soliciting help from these agencies including the Ministry of Agriculture and the Sanitary Works Office. They continue to receive help for water pump installation and latrine slabs. While enhancing the ability of communities to access the government for additional assistance was not a stated goal of the Project, it is a consequence of considerable importance.

Project staff have provided coordination of groups and agencies with direct health interest. They have also adjusted their own efforts so that the communities could take greater advantage of other development services. They have obtained assistance for their work from the Peace Corps and have utilized other AID project services to bolster community development work in coordination with their health service activities.

Persons who were initially volunteers with the Project have improved their own knowledge and skills through the Project. With encouragement and support from the Project many have received additional education, improved their literacy or become participants in the government's training and service program.

The health impact of the Project is hard to judge. Sophisticated data collection techniques have not been used and, even if they had been, it would be difficult to attribute any change to the Project because the populations

are being influenced by so many dynamic forces. It is fair to note, however, that there appears to have been no epidemic of measles since the beginning of the Project although there had been in the mid-1970s.

The Project has participated in the installation of water pumps and latrines. Latrines are found in every project area now whereas there were none in most communities before. Project staff report several improvements in sanitary practices and the condition of dwelling units.

In its relations with the MOH and provincial health offices, the Project participates in a coordinated effort of shared responsibility in the maintenance of community level workers and service provision. The Project has turned over to the government program some communities for which it was responsible and has assumed additional responsibilities in other areas.

As a result of the Project, local evangelical associations and participating missionary groups have developed a heightened awareness of public health problems and greater interest for supporting and otherwise participating in local development programs.

PROGRAM STRATEGY AND COMPONENTS

The Implementing Agency

Vozandes Hospital of Quito initiated the grant proposal under which the program has been implemented. Because Vozandes was not a PVO registered with USAID it was necessary to work through MAP International of Quito, to whom the grant was directly awarded. Vozandes, however, is the primary implementing agency.

*MAP  
Training  
part of grant*

Vozandes has been providing health care in Ecuador for 33 years. It began operating a small clinic to serve indigenous people in Quito in 1949. The existing 50-bed hospital in Quito was constructed in 1955 and the 25-bed hospital in Shell was built in 1958. Vozandes has also managed medical caravans that have covered various rural areas of the country. Since 1968 it has been training and supervising volunteer health workers in Morona-Santiago province. The professional and administrative staff of Vozandes consists largely of expatriates from the United States, Europe and Australia but there is an increasing number of Ecuadorian physicians and nurses and the hospital provides residency training for local physicians. Some Ecuadorian physicians are assigned to the hospital in Shell for their one year rural residency.

Vozandes is a part of the World Radio Missionary Fellowship, Inc., based in Florida, USA. It began broadcasting from Quito over 50 years ago and now operates a station, HCJB, that sends long and shortwave broadcasts throughout the world.

MAP International, based in Wheaton, Illinois, began working in Ecuador in 1975 when Vozandes asked them to assist them in developing workshops and programs in health and community development. MAP has had a long and continuing interest in these concerns.

The role of MAP International has been an important one. Initially, MAP's director shared an office with the Community Development staff of Vozandes in the Quito hospital. The Vozandes group drew heavily on his experience with project planning and organization. The MAP director in Quito during the first three years of project implementation had been trained in techniques of the Project. He worked closely with Vozandes people and participated in the preparation of training materials, curriculum development, training evaluation and the actual training of health workers. MAP has also sponsored training and evaluation consultants who have made clear contributions to the program. Personnel from MAP have also participated along with Vozandes staff in health auxiliary worker training offered by the Ministry of Health and have introduced project-tested methods of non-formal education into the governmental program.

Since the Project's major thrust has changed from training to supervision and maintenance and interests have broadened, the direct participation of MAP personnel has declined. MAP, in July of 1982, did sponsor a workshop on evaluation for project staff, however, and it continues to coordinate its interests and support with those of the program.

Both MAP International and Vozandes Hospital staff view health as a broad concern and as an integral component of community development. Their orientations have allowed them to move in different directions and to deal with an array of tasks that encourage them to adapt to changing conditions and to take advantage of emerging opportunities that should contribute to program success. Home gardens, water pump installation, literacy, housing, and animal care, among other things fit quite easily in their categories of health concerns.

MAP has made important contributions to an agricultural program in the Colta, Chimborazo area. It has provided initial support for the creation

of farmer cooperatives and savings groups and it helps to fund supplies for an expatriate agronomist working with local farmers there. The agronomist has, in turn, worked with the health project in its development of community and family gardens and he has assisted with pump installation and maintenance.

MAP personnel have also worked with association members providing training in such tasks as telephone use, letter writing and preparation of solicitations to government officials. The purpose, and result, of this has been to enhance the ability of communities to access available government services.

A number of other missionary organizations also participate in the Project, providing services, personnel and other in kind contributions. These include the Gospel Missionary Union, Berean Society, Wheaton College of Illinois, Free Will Baptists, the Luke Society and the Missionary Aviation Fellowship. Georgia Tech with USAID funding has been concerned with water pump manufacture and installation. The Peace Corps and other USAID funded personnel have also been involved in various aspects of the program. The participation of the government and local indigenous organizations will be discussed more fully below.

Comment: Coordination of the contributions of the many participating groups, in itself, is a complex task reflecting a complex project. While most of the staff are not paid directly by the Project, they are provided vehicles and other support funds, including travel expenses, by the Project. These have been critical for Project operations and coordination. They have allowed the four distinct project areas to be implemented in a coherent and organized manner.

Participating staff from the several groups include professionals and

persons with long experience in working with health concerns of local persons.

#### Implementation Strategy and Provincial Evangelical Associations

In each of the four operational areas the Project has worked through the provincial indigenous evangelical association. These have been organized largely with the assistance of local Protestant missionary groups and have a strong religious component. They also have secular interests that have included, among other things, cooperative transportation organizations, agricultural and live stock improvement, radio communication and community education and development. In each province they existed at least several years prior to Project implementation.

The associations have had some responsibility for identifying communities that would participate, encouraging those communities to solicit Project leaders for participation and the generation of community health committees. Actually, much of the groundwork in Chimborazo and Morona-Santiago provinces had been done prior to project funding. Dr. Naula, the indigenous physician who has subsequently been funded by the Project and is the area supervising physician, had already generated community interest for a health worker program in Chimborazo. In his role as an affiliate of the GMU Mission in Colta, as a member of the Chimborazo association and as a practicing physician he had been working in the neighboring communities for some time and had encouraged support for the activities that were subsequently implemented by the Project. It was because of this interest that Chimborazo was selected as the first project area. In Morona-Santiago existing health workers who had received training on an individual basis from local medical missionaries and were also members of the local association provided entree to communities and links to the indigenous association that were further used in the expanded Project.

The provincial associations established "health commissions" that have provided a link between the Project staff, the local association and participating communities. Concerns seem, however, to be still taken up by the association as a whole and association presidents appear to have close direct contact with Project staff.

Comment: It seems all the original health worker volunteers came from communities where the association was strongest. It is not clear whether all the original volunteers were members of the association themselves or (in the case of the few women volunteers) were relatives of members although this is probable. As the responsibilities for supervision have changed, and some government trained workers have come under the Project staff, religious and associational affiliation have not been limiting factors.

Although I raised questions and looked for evidence during my two brief visits to the Project (1981 and 1982) I was able to uncover no patterns of exclusion or favoritism on the parts of health workers or community leaders regarding the provision of services or expected contributions to community projects. Both Protestants and non-Protestants persons participated in mingas (community work efforts) and health workers routinely visited all the homes in their catchment areas.

Project staff did note that there were some differences between their Project with association identification and the projects operated by Roman Catholics working with federations of Catholic men. Their territorial coverage, however, seems to be well defined, without overlap. The resulting competition seems to limit cooperation between them and they lack the advantage of learning from one another. Provincial health officials are sensitive to the territoriality and the different approaches of the organizations and tend to support the territorial boundaries to some extent.

In Bolivar province, conflicting orientations of expatriate missionaries have resulted in some difficulty that has had impact on the project. One missionary who had been working in the province for some years strongly believed that evangelical groups should not be concerned with secular affairs such as health programs. This has resulted in the departure of the expatriate who was nominally in charge of the project and its ties to the association in that province. It is to be noted, however, that the health workers in Bolivar continue to provide health services in their communities and several have had further training under the government program. The expatriate health worker supervisor continues to work with them as a supervisor and in the provision of inservice training.

The higher rates of participation in Chimborazo and Morona-Santiago provinces seem to be the result of strong associations with long histories of interest in community development. It was noted by several persons that the associations were notably weak in Pastaza and Bolivar.

The Project has demonstrated the feasibility of working through Evangelical associations in initiating primary health care programs. While evidence is not conclusive, it appears that this may be a best means of stimulating interest and participation of communities in these areas of Ecuador. Working through the associations has, however, both advantages and disadvantages. Where the associations are strong and pervasive they serve as a ready and cooperative means through which to implement health service programs in an efficient way. Where the associations are not strong and not pervasive initial work with communities may be difficult and the scattered participating communities difficult to manage. With the success of operation in those few communities others have however solicited to participate in the Project and in the government's expanding program of primary health care. Project staff

in all provinces have worked with additional communities to assist them in placing their members in the government training program so that they could obtain services such as those now provided by the Project.

It is clear that the associations have provided an avenue by which many communities have accessed potentially available benefits from this Project and from government agencies. They have also offered means by which Project personnel and others can reach large segments of the people and to learn about the special needs of communities. From the point of view of the government that is interested in extending primary health care more broadly throughout the country it can be reasonably argued that the associations have allowed implementation of service programs with greater ease, with more supportive responses from communities and with greater participation of the people through representatives than would have been possible without them. It is also fair to say that the intervention is popular with the communities that are involved and that many more have sought their involvement as a result of that manifest satisfaction.

#### Training

The initial training of health workers was planned to include didactic and practical sessions of several weeks duration at centers in the provinces from which trainees were drawn. Through close, interpersonal monitoring of the progress of the trainees the staff was able to assess their progress in understanding what was being taught and their mastery of skills in providing services and working with the communities. As a result of early experiences it was concluded that training would better achieve its goals if sessions were divided into several short periods that were highly repetitive and if non-formal educational techniques were introduced. The non-formal

educational techniques were implemented through the assistance of the MAP director and with the assistance of MAP supported consultants from Michigan State University.

The division of training periods meant that trainees did not have to spend such extended periods of time away from their families and communities and resulted in less disruption of their lives. It also provided greater opportunity for trainers/supervisors to monitor worker performance in the field and continually adapt training methods, content and materials on the basis of their evaluations. As a result of this system, staff learned that training needed to be considerably more repetitious than they had anticipated and they were better able to reinforce what workers had learned during their supervisory contacts. Continuous supervision represents a sizable part of continuing in-service training of the workers.

While it was possible in Chimborazo province to recruit health workers who had completed primary education and who were more than functionally literate in Spanish, such persons were not as available in other provinces. As a result, the program accepted persons who were less prepared to handle the sort of materials and procedures that had been planned and it was necessary to tailor their methods regionally and individually.

Many of the health workers increased their Spanish language capacity through program training. Some of the training, however, was also conducted in the indigenous languages of the trainees and some materials were prepared in those languages as well. Some of the workers have since participated in the national literacy program (Alfalit) or have gotten additional grammar school education as a result of encouragement by program personnel. In doing they they have increased their own capacities and have been enabled to meet (or come closer to meeting) minimum standards for recruitment into the government's program for health auxiliaries.

Several staff members have provided consultative services and participated in the actual training of persons enrolled in the government's training program, drawing on their experiences in their own project. They have introduced some of the Project tested, non-formal education methods into the government program as well. Some of their training materials are being incorporated into those used by the government.

Over 130 persons have been trained under this Project. Ninety are still active. Many have also participated in the government's health auxiliary training program. Project staff provide in-service training and supervision to health workers trained by them and by the government.

Comment: The training procedures employed by the Project represent an important set of experiments and adaptations. Descriptive documentation and formal analysis of the methods tried remains scant and therefore unavailable to outsiders who would find them of interest. In-service training also seems to be emphasized in the Project but is only briefly mentioned in the various reports provided. Criteria used in the evaluation of teaching methods and materials remain unspecified as are the means of assessing the abilities of individuals who have received the training.

#### Supervision

A major component of the Project has been its supervision of health-workers by trained health professionals who are seriously dedicated to working with indigenous Ecuadorian populations in rural and isolated areas. The Project has demonstrated its ability to maintain a supervisory staff that seems much superior to what is provided in other programs working in the same or similar areas of Ecuador.

Supervision is used not only for monitoring and holding accountable community level workers but is used extensively as part of the in-service training of those workers. Active and participatory supervision of the health workers appeared to be acceptable to them. Indeed, they regularly seek guidance and interact fully with their supervisors. In the instances I observed, workers needed help in many aspects of their work including diagnosis, provision of supplies, the completion of paper work and storage of materials. It appeared that this sort of supervision was sought equally by workers who had been trained only in the Project and those who had participated in the government's auxiliary training program.

Despite the considerable attention given to supervision it has been a problem especially in Bolivar and Pastaza provinces. In Bolivar the Project communities are few and widely scattered over difficult terrain. Because of their distribution, it is not possible for the supervisor to make more than one site supervision in a day nor to work the various communities as a circuit. This means that supervision per se represents a fairly low proportion of her professional activity while transportation takes a very large amount of her time. It raises questions that I cannot answer regarding the possibility of continuing, expanding and replicating such a project.

Project communities in Pastaza and Morona-Santiago are accessible only by small airplane. Weather conditions often hamper attempts to land and take off in those provinces. As a result a great deal of time is used in waiting. Rescheduling on an hour-to-hour basis is frequent. The Project supervisor in Morona-Santiago shares supervisory responsibilities with two government auxiliaries who were originally trained by the project and given further training by the government program. It appears that together they are able to visit community workers several times a year. The Project physician working there also makes regular visits to the field. He dedicates half-time

to this work, offering clinical services as well as providing supervision.

In Pastaza the Project has never had a full-time staff supervisor. The Project physician working there spends half his time as director of the Vozandes Hospital in Shell. The physician now working there indicated that most of his project time is dedicated to providing clinical services to the communities in Pastaza and that he has little time for direct supervision. Supervisory contacts in the field number only one or two per year. He provides clinical services in many more communities and the six that are served by community level workers. The Project physician working in Pastaza during the first 2-3 years of operations had a similar pattern.

Chimborazo workers seem to have had the most intensive supervision. The physician and expatriate nurse both dedicated the majority of their time to this work. The physician is now on education leave but the nurse has been supplemented by a nurse practitioner who has been there for the past 18 months or so. The government has recently assumed responsibility for much of the area that was formerly part of the Project and there are now only five workers being supervised by the two nurses. The communities are located close to Colta where the nurses are based so supervisory visits are made frequently. The nurses also work closely with the communities and the workers in other activities in a participatory fashion.

Comment: In-service training through field supervision constitutes a significant aspect of this program and is believed to contribute markedly to improved worker performance yet this remains both little celebrated and undocumented. While I have not observed the government program in Ecuador (other than those parts shared by the Project) I have found that such supervisory procedures are lacking in many programs elsewhere.

It is evident that the supervisory component is expensive in terms of professional time and that it requires high cost transportation systems including planes in the Amazonian area and 4-wheel drive vehicles in the provinces of the Sierra. There is some question that the personnel, at least, could be made available elsewhere at any possibly affordable cost.

Because of the potential cost factor in the absence of outside support could be critical, the efficacy of different patterns of supervision and in-service training should be analyzed. The different patterns found in the four provinces provide an opportunity to analyze some variations and should be exploited. This could be done in part by assessing worker activity records that are now sent to provincial health offices without analysis by Project central staff and through some observation based assessments of worker performance in the field.

The cordiality and collegial quality of interactions between supervisors and community level workers observed in this program are notable.

#### Service Provision and Worker Performances

Community level workers emphasize promotive and preventive health services. They work with local health committees in the promotion of programs of latrinization, pure water supply and general improvement of community health conditions.

Health workers are available to residents who seek assistance with acute health problems and referral but a large portion of their time is consumed in making routine home visits. The home visits provide opportunity to monitor pregnant women and infant health problems. During home visits workers also provide education and encouragement regarding health practices such as hand washing, water purification and storage, household sanitation and the care of pregnant women, and infants and children.

The amount of curative care provided by community level workers differs among the provinces. While Ministry of Health policy does not allow workers to distribute antibiotics and other curative drugs, the limited access of professional health personnel has led to relaxation of the restrictions in the Amazonian provinces. Project staff have differed also in their own attitudes regarding the dispensing of curative drugs. While they have felt that the addition of a curative component would give a boost to their acceptance by communities some have argued that it would not be appropriate.

Community level workers participate in vaccination campaigns with Project supervisory staff and government personnel.

The workers have maps identifying all dwelling units in their catchment area. They maintain records on all families in their areas.

Activity records are submitted periodically to the provincial health office. These include data on worker effort and health conditions within the community. Project supervisors sometimes help in the preparation of these records but they are not kept by the Project nor are they used in performance assessments.

Comment: Worker performance is observed by supervisors during their periodic visits. Family records may also be reviewed. There seems to be no attempt to perform systematic assessments of performance nor to compare the performances of workers under different conditions of work. While supervisors appear to have a good grasp of what is being done in their different communities and of problems encountered by the health workers, it would be desirable to have more systematic information. This could lead to improved supervisory and training techniques. The data that are routinely submitted to provincial

health offices could also be used by Project staff to assess performance and support needs.

Discussions with a few health workers suggested that they were well aware of health problems in their areas, that they monitored pregnant women and followed up on referred cases. They seemed to have good rapport with community leaders and with families they served.

All the health workers I saw were male. While they admitted that men had difficulty in dealing with female patients there seemed to be a general assumption that men worked better with communities and with health committees. It would be desirable to look further into this and to assess whether indeed, when primary concerns of a health project involve the care of mothers and their children appropriate persons are recruited into the program. It may be that the men have an easier time dealing with leaders but they may not be able to deal with some important health problems.

#### Coverage

Coverage is always difficult to assess in community health programs. Because of the changing responsibilities for supervision and coverage of this Project vis a vis the government and the interests of staff beyond the communities in which they are assigned community level workers, attribution of "coverage" is indeed difficult.

The Project has information regarding the number of persons living in communities served, the numbers of infants and children receiving particular vaccinations, the frequency of contact and a number of other parameters. Because the territorial and service responsibilities of the Project have changed so much over its life, however, it was not possible to judge from the available data just what is and has been its coverage.

Project staff participate in vaccination programs in communities where there are no assigned health workers. They also supervise workers who are considered a part of the government's program. Many of the 130 persons trained by the Project are now managed under the government program and persons from other communities access the workers and professional staff for curative care and for referral recommendations. At least two communities that were under the Project now have social security clinics and in Macuma the government has built a health center staffed by a rural physician.

Project personnel are now ordering their data on vaccination, supervisory and community level worker treatment of the population. They are working with their own census data maintained by workers for their catchment areas. While these data will provide additional understanding of coverage, they give only a partial picture at best and they need to be supplemented by a more detailed description of all Project staff responsibilities and activities which cover a considerably broader area.

It is clear that the Project is reaching some populations that are culturally and geographically remote, populations that would not otherwise receive only western health services. The Project requirement that communities solicit to participate means that the most remote do not take part. It may also mean that the services are not implemented where they would be most disruptive of existing cultural patterns and social organization. Solicitations are still frequently received by the Project, indicating that communities are interested in participating and coverage could be expanded if resources and regulations allowed.

#### The Role of Women

Personal health services provided by community level workers are aimed largely at improving the health of infants, young children and mothers.

The care of children generally involves conferring with mothers and instructing them in the manner of applying treatment and improving care practices. There is, however, a notable lack of females among the Project trained and an expressed bias in favor of males.

Much of the promotional effort of the Project is carried out with men, including that having to do with water pump concerns, latrinization, housing of animals away from living quarters and gardening. Household cleanliness, care of infants and children and promotion of care of mothers and pregnant women, however, involves direct contact with women.

Expatriate females working in the Project carry out a lot of the face-to-face work with the women in the communities in their participation with the Lecheavena Program and mothers' club activities. They also interact with women during their supervisory rounds and are sought for personal services.

The government's health auxiliary program also has a notable predominance of male participants.

The lack of females among community level workers was attributed to the fact that women were less likely than men to speak Spanish and to the preferences of communities who nominated persons to the Project.

It is somewhat surprising that women in Chimborazo do not participate more frequently as health workers. The GMU in Colta has long had female expatriates who speak Quechua. Some decades ago, it was reported, women were assigned to the mission because supporting churches were expressly interested in working through the women in the area. While the missionary women continue to work with local women, there seems to be no explicit concern for their lack of participation as community level workers.

Additionally, men of Chimborazo often migrate seasonally to the coastal area. This being the case, it would be expected that women might be more

consistent workers.

The expatriate women working in the Project appear to have considerable rapport with both male and female residents of the communities and to work well with male leaders and workers. They are sought for assistance and they seem to be fully accepted as qualified professionals. Their work with women is an important aspect of the Project which should be recognized by those who are concerned with replication and expansion.

While the failure to include many women as community level workers might be considered, at this time, to be culturally appropriate it should be noted that with the expansion of formal education, especially secondary, is resulting in increased numbers of Spanish speaking women in all provinces. This should be making it much easier to involve women in health auxiliary programs. In the two provinces visited during this recent observation there were women in each community who had Spanish language ability.

In Pastaza it has been difficult to find men who were proficient in Spanish yet Project personnel managed to produce training materials that they could use with those non-Spanish speaking men and staff were sufficiently proficient in the local idiom to perform the training or to bridge differences in language ability.

#### Recognition of Traditional Health Practices

As was noted in an earlier report, the Project appears to take no formal notice of traditional health practices and beliefs and has made no attempt to work with indigenous health care providers. As far as I could tell, this situation persists. This is not to say that field personnel are insensitive or totally unaware of local practices but they seem to have made no concerted effort to understand just how disease and health are viewed by local people and to cooperate with curers or midwives.

Doubtless, accommodation of indigenous beliefs is made through community health workers who have grown up in the cultures and have received training in western health care. Dr. Naula, the MD in Chimborazo, has obviously been able to some extent to bridge the different systems and to enhance the cooperativeness of western medicine. Others with long experience and sensitivity have also managed to incorporate their own understanding and experience with local people into their practice and training. Still, it would be useful if project personnel would elaborate more clearly just what local beliefs and practices are and how they are accommodated.

It was observed by one project staff person that in working with Ecuadorian health professionals in the area she taught those professionals about local birthing postures and family expectations thus enabling them to deal more effectively with patients. It would be well if this sort of thing were expanded and systemized so that it could be routinely incorporated into health worker training at all levels. It may well be that much of the appreciation for local customs is implicit in the training practices but this could not be observed.

Tailoring training to different groups of health workers has also probably contributed to making it more relevant and appropriate to local conditions and allows more individualized attention to different practices and belief systems but this is not documented.

#### Relations with the Government and Impact on the MOH System of Primary Health Care

Through informal contacts and formal presentations the Ministry of Health has been kept apprised of Project plans and operations. Some officials have taken advantage of opportunities to make site visits to observe training and service provision activities.

The professional staff of the Project has contributed consultative/ advisory services in the planning and policy making regarding the MCH auxiliary health worker program and in the preparation of training materials. Some members have also participated in sessions of the government health aide training program.

Promoters who were initially trained by the Project have often had subsequent training under the government program. Some of these persons have been sponsored and partially funded through funds secured by the Project. Project supervisory staff in all provinces have at least some responsibility for supervising workers who are now fully under the government program. In Morona-Santiago, the Project nurse has been designated the responsible nurse supervisor for all government workers in her area. She works with two other government-provided aides who also act as supervisors. She is also responsible for operating the government vaccination program there and maintains a bodega for storing government provided drugs.

While Project staff work with government sponsored community level workers in other provinces as well, their responsibilities appear to be fewer and less formalized.

In Chimborazo the majority of Project trained health workers have been further trained by the MOH program and most of those still functioning are not now formally linked to the Project. They are supervised by the rural physician in the town of Columbe, a few miles away from Colta. On occasions when the government's supply system has broken down in Columbe, the Project has assisted them. Project personnel have also worked with rural physicians and nurses so that they could deal better with local problems.

These cooperative arrangements between the government and the Project had enabled the government to extend its own program to train more workers and to expand coverage. It has also recognized the need for some flexibility in

recruitment, training and assignment of tasks to health workers. For example, in the Amazonian provinces where access to professional health care is severely limited health workers are trained to provide more curative care there than they are in other places. This seems to be a rather direct result of Project demonstration of the rationality of such a move.

It is evident that methods and materials developed by the Project have diffused to the governments program. Training materials now being prepared by the government incorporate many of the ideas employed in the Project. Project personnel have been asked to review and comment on these.

Government officials are increasingly realizing the appropriateness of continuing education and close supervision of community level workers as following the experience and demonstration of the Project. Whether they can handle these within their own system is, however, problematic. The expense of maintaining professional supervision and the lack of sustained interest on the parts of rural physicians raises questions about the probability of replication of this component.

The success of the Project in assisting local people to access government services more fully and in coordinating the services that can be provided has been observed by some of the MOH officials. As a result they have acknowledged that health should be conceived more broadly in their own training programs and that trainees should be sensitized to more interrelationships between environment and health and between technology and health. The extent to which this has been incorporated into the training program and health policies is questionable but it was recognized and noted.

In trying to assess the impact of the Project on health plans and policies, I attempted to obtain relevant documents from the Ministry of Health but these were not available during my visit. It is doubtful that

there would be specific attribution of ideas in such documents but they might be helpful in assessing parallels and seeing if there is truly increased interest in primary health care following this Project.

While this is one among many PVO operated health service projects in Ecuador it is considered by the MOH to be one of the most active and it seems that the government does have more contact with it and its staff than with others. As an extension of Vozandes Hospital it doubtless receives more attention than it would were it an isolated project operating in remote provinces. AID's sustained interest in the Project also stimulates more concern for primary health care in rural areas. The notable openness of the Project and the willingness of the staff to view their work as experimental and as a means of extending government capability and to turn over their responsibilities to the MOH program has contributed to especially good relationships. It has also led to a posture of receptivity on the part of officials. This being the case, it is incumbent on project staff to systemize their observations and to document them more closely so that it is possible to make informed judgements regarding the adequacy and appropriateness of their particular efforts.

#### Reporting and Data Collection

Quarterly and annual reports have been submitted to USAID/Quito on a timely basis and discussed routinely with AID personnel. The reports have addressed not only accomplishments and alterations of project scope and plan but have acknowledged problems as well. They have noted difficulties in training, problems in dealing with local people and differences with provincial officials in gaining acceptance for workers and the array of tasks they are expected to perform.

As a result of recommendations from outsiders, there has been some attempt to assess what they are not doing as well as what they have done. They have at least considered the population in each province that is not covered by the Project.

Systematic data collection other than counts of latrines, pumps and the populations in the communities served has been limited. There have been no systematic epidemiological or health practice studies.

Following the evaluation workshop held in July of this year, field staff have been writing more systematic reports of activities and accomplishments in their own areas. The workshop emphasized the need for good descriptive reporting and sensitized the staff to treat their observations as useful qualitative assessment. These field reports were in draft form during my visit and provided useful information as well as bases for discussion and comment in the development of my own impressions and in outlining their planned end-of-project report.

Project staff have made two formal presentations that were attended by government health officials and USAID personnel. The first was held at the beginning of the project and the second was held at the end of the third Project year. The purpose of the meetings was to inform the government of the plans and accomplishments and to insure that there would be coordination of the Project with MOH plans. It is expected that there will be another presentation shortly after the termination of AID funding. Informal meetings with Ministry and provincial officials are held frequently.

In the process of working with communities and providing services, some data are collected rather systematically. Each catchment area is mapped and censused and health workers maintain family health records for their areas.

Monthly activity and environmental change reports are submitted to provincial health offices by the community level workers. Almost no use is made of any of these data by the project other than in face-to-face supervisory contacts. They are not aggregated or summarized in their own reports. Much more could be done with them, especially in assessing coverage and planning for future effort. They could also be analyzed in evaluating replicability of the Project.

While one would discourage the sort of data collection appropriate to a large scale, controlled experimental situation there are many things the Project should be trying to assess. For example, births and deaths within the served communities could be monitored easily by workers who know their communities well. Also, they could report incidences of diseases against which they routinely immunize. For diseases that might be difficult to monitor in a case-by-case manner but which have manifestly high (or low) rates should also be reported. It is also possible to note clinical observations of nutrition levels of infants and children which now seem to be overlooked in reports. These and many other phenomena and often sufficiently dramatic in their presence or absence to be observed by trained professionals without conducting elaborate survey investigations.

The initial goals of the Project were stated in rather non-specific form. While clear quantitative targets were probably inappropriate in this sort of Project, the persistent lack of attention to specific levels and important changes does not contribute to the awareness of accomplishments or of specific problems. These were problems not only for their own assessment and planning but for outsiders who might be interested in replication. It means also that the Project can be more easily subjected to capricious political decisions regarding the sorts of care it is allowed to offer.

No one appears to be making comparisons of the progress of this project and its impact on its participating communities and those of other programs. Nor has there been an effort to assess systematically the continuing progress in areas that were initially under the Project but which have been taken over by the government. This represents missed opportunities for improving the evaluative analysis of the Project--for the staff to assess the promise of alternative methods of implementation.

### Replicability

The Ministry of Health has in the past two years assumed responsibility for training and deployment of all community level health workers throughout Ecuador. The question of whether the groups implementing this particular project or other private organizations could replicate it elsewhere in the country is, therefore, moot. Replication by the government is a separate question.

Many principles and techniques that have been tried by the Project are being incorporated in the government's strategy for providing community level care. The MOH program has drawn on Project staff for advice and assistance, generally in an informal manner but as participants in training and as continuing supervisors of government trained auxiliaries as well. The resources of the Project have been used to expand coverage under the MOH program.

There are numerous features of the Project that could be easily duplicated in any program if they are demonstrated to be supportable and their results are demonstrably superior to alternatives. Working through existing local organizations, the step-by-step and non-formal training methods, training materials, supervisory patterns and service elements are among these. Also, the broadening of health concerns as implementation progresses should provide useful lessons for other interventions. The cooperation of private organizations in the development of service systems of interest to the government has also been demonstrated. Even if policies would not allow such private

organizations to be as fully responsible for health service projects they could be used to stimulate interest, to assist in the coordination of local groups and to supplement services provided by the government. Most of these features could be replicated without increasing costs of projected MOH schemes.

The Project has depended heavily on existing organizations covering wide areas. It has demonstrated that associations with a religious basis will include secular concerns among their interests. This takes advantage of a growing tendency, especially in the Sierra, to replace the haciendado system with more egalitarian system of mutual responsibility. Where the Project has had access only to weak associations it has been less successful. Because expansion was limited by government policy it is not possible to know if they could have generated greater participatory interest in those areas. The differential success experienced in gaining initial interest does raise a question about replication using the Project's strategy elsewhere.

There are many features of the Project that do not appear to be very costly as it now stands, yet replication would be very expensive. One of these is its dependence on a number of expatriate professionals who are willing to work this way would doubtless be difficult regardless of support. Those who are now working are provided special conditions that would not be available to persons employed by the government. These include schools for children and residential communities that offer considerable social support.

Implementation of the Project has depended on well equipped staff who are provided access to costly means of transportation including AID funded 4x4 vehicles and a system of air transport operated by MAP. The existence of radio communication networks maintained by missionaries and local Evangelical associations has been critical for Project operation.

Although the MOH has been expanding its capacity it is questionable if it could provide the same sort of support system for its personnel. The

intensity of supervisory coverage, a major feature of this Project, will be difficult to reproduce at what the government might consider affordable cost. Current efforts to utilize more sub-professionals in the supervisory system may offer a more feasible alternative.

The government program is now using MAF planes to transport a few of its own supervisors and can probably continue this. The capacity of existing personnel and aircraft to handle an increased load for expansion or replication is limited. The possibility of utilizing aircraft to access remote Amazonian populations has, however, been demonstrated.

Radio communication between central locations and communities throughout Ecuador exists. The network appears pervasive where Vozandes/HCJB works with local groups and it is reported that others also have extensive systems. These can be and are accessed for many purposes and by many groups not affiliated with the operators. These might not be limiting but they could represent a cost that must be considered in any attempt to replicate the Project or its essential features.

Assessment of Project costs and the essentiality of its components for other programs of equally probable success is critical. It will provide needed guidance for planning the expansion of primary care in a rational manner. Until now there has been little consideration of providing such an assessment and the Project has not been described in ways that lend themselves to cost analyses that would be most useful in assessing overall replicability. It is fair to say that the Project has not been called upon to do this in an explicit way. It would, however, represent a valuable contribution.

## Conclusion

This Project has a number of striking features. Among these are its sheer scope and complexity and the ability of Project staff to maintain control of its operations in the midst of dynamic conditions and institutional relationships. The four distinct contexts in which it is being implemented have required such dramatic adaptations that it would be appropriate to think of it as a set of coordinated sub-projects, each offering different experiences and lessons.

It is important to note that the Project staff view their own role as transitory. They see their efforts as offering initial impetus for community and government interest in the provision of primary health care in areas where affiliated organizations have an interest. The Project, then, offers an opportunity to test implementation and operational techniques that will, in the long run, improve the government's capacity to expand coverage of its own programs. This is not to say that this particular Project is not distinctive or innovative: Although Project components have been tried elsewhere the particular configurations that have resulted from adaptation to existing circumstances represent novel cases.

The Project is meeting the terms of its plan. It is to be noted, however, that the initial plan was not a rigid one. As is often the case in smaller programs financed by USAID and implemented by private voluntary organizations, the plan left many parameters open and encouraged flexibility. This seems to have been especially appropriate for the Project, which proposed implementation in a number of areas that had many unknown qualities. Changing government policy and activities related to health, the varying availability of supportive resources and the inexperience of local organizations were all factors that required course alterations and changes in priorities as the

program developed. The Project has demonstrated the feasibility of adaptive programming. As a result government officials have, to some extent, recognized the need to tailor their own efforts to different conditions, which is something that they were not willing to do until its importance was argued and demonstrated by Project staff. It was a change that was observable between my two visits to Project areas and discussions with health officials.

The Project has coordinated the efforts of a number of expatriate groups, reinforcing their interest and capacity to engage in health and development activities. It has also demonstrated that the groups can work cooperatively with local Evangelical associations, which were important for gaining community acceptance and participation. This strategy has, however, met with uneven success and appears to depend heavily on the strength of existing Evangelical associations. The Project has not been able to work as well in areas where associations are weak nor has it generated alternative strategies that would serve as well. It is to be noted that this was not fully tested because Project expansion was curtailed when the government made the decision that only it could conduct training for community level workers in Ecuador. Whether more communities not affiliated with the Evangelical groups would have sought and found means to participate in order to emulate those that had promoters is an open question.

In its initial proposal the Project indicated that it would train government officials in the process of program operation and maintenance. This has not been done in any formal sense but government officials have been invited to participate and observe Project observations and some have done so. Additionally, Project staff have consulted often with various MOH and provincial health officials, describing their own activities and making recommendations for the government's efforts. Project staff have also worked with the MOH in

its efforts to expand coverage of primary health care and have assisted it in assuming responsibility for portions of the Project areas. In other areas the Project continues to maintain supervisory and other responsibilities for both the promoters who have received training only through the Project and those who have been trained in the government's health auxiliary program, thus becoming an integral part of the overall government program.

The Project has succeeded in reaching very poor and underserved populations in Ecuador. It has, however, not reached all such people even in the areas where it has some coverage. Communities that cannot be reached by motor transportation and aircraft are not likely to participate. That there are limits resulting from dependence on the cooperation of the Evangelical associations has already been suggested. The criteria that communities must request participation and that they must insure support for health workers also necessarily limits participation.

The Project does not appear to have tried in any conscious manner to adjust its own practices to indigenous beliefs nor has it made an effort to incorporate traditional health practitioners. Still, it seems that the program operates as an integrated adjunct to other sources of change and that it is accepted by the people it serves. Although at least one health worker has been rejected by a community there is no indication that there is a rejection of the principle of primary health care using community workers. Indeed, where original workers have left, communities have tried to have replacements trained.

There have been some studied, but sometimes inadvertent, features of the Project that have mitigated potentially disruptive impacts of intervention. That communities must solicit to participate means that they have generally already accepted what the Project offers and that they have had experience working with external groups. What could be something drastically disruptive

of local organizations and beliefs is also lessened because health workers are drawn from the communities they serve. The presence of a Quechua physician in Chimborazo and expatriates with long-term experience in other provinces doubtless contributes to sensitive implementation.

Many features of the Project are already being taken over and replicated by the government program. Since policies restrict training of health workers by those other than the MOH, the question of replicating by either Vozandes or other voluntary organizations is moot. The implementing agencies have, however, demonstrated their willingness to aid in expanding the coverage of the government's program and in trying to replicate some aspects in their participation. The availability of expatriate professional staff who offer participation should be recognized as an important consideration in the assessment of replicability and program maintenance elsewhere. Without that continuing contribution, conducting the intense supervision and in-service training that are large elements, replication could easily prove too costly for the government to sustain on a wide scale.

A serious criticism of the Project is that staff have not documented fully its activities, changes and special adaptations in ways that can be communicated to outsiders. They are to be complimented for the knowledge they have of what they have done and their openness in responding to questions but the lack of clear documentation has resulted in lack of recognition of successes and neglect of some probably important comparisons among results in the four Project areas and between this Project and others in Ecuador (and elsewhere). This should be rectified in their end-of-project report. ||

A less remediable fault is that of neglecting systematic collection of information on health conditions in the service areas. Perhaps some dramatic changes in particular diseases can be reconstructed in useful ways but variations among most specific health conditions that should have been sensitive to the services provided remain unknown. Such information could be valuable for impact evaluation and program design. Data that have been collected by community workers have generally been forwarded to government offices or they remain in worker's files, without aggregation and systematic analysis. These could be used to assess better Project coverage, worker effort, and service costs.

## Persons Contacted

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